



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, DC 20460

OFFICE OF CHEMICAL SAFETY
AND POLLUTION PREVENTION

November 25, 2014

Judy Ball
Chemtura AgroSolutions
199 Benson Road
Middlebury, CT 06749

Subject: Label Amendment – adding “me too” use tree nut group to label
Product Name: DoubleTake
EPA Registration Number: 400-593
Application Date: 6/23/2014
Decision Number: 494059

Dear Ms. Ball:

The amended label referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide and Rodenticide Act, as amended, is acceptable. This approval does not affect any conditions that were previously imposed on this registration. You continue to be subject to existing conditions on your registration and any deadlines connected with them.

A stamped copy of your labeling is enclosed for your records. This labeling supersedes all previously accepted labeling. You must submit one copy of the final printed labeling before you release the product for shipment with the new labeling. In accordance with 40 CFR 152.130(c), you may distribute or sell this product under the previously approved labeling for 18 months from the date of this letter. After 18 months, you may only distribute or sell this product if it bears this new revised labeling or subsequently approved labeling. “To distribute or sell” is defined under FIFRA section 2(gg) and its implementing regulation at 40 CFR 152.3.

Should you wish to add/retain a reference to the company's website on your label, then please be aware that the website becomes labeling under the Federal Insecticide Fungicide and Rodenticide Act and is subject to review by the Agency. If the website is false or misleading, the product would be misbranded and unlawful to sell or distribute under FIFRA section 12(a)(1)(E). 40 CFR 156.10(a)(5) list examples of statements EPA may consider false or misleading. In addition, regardless of whether a website is referenced on your product's label, claims made on the website may not substantially differ from those claims approved through the registration process. Therefore, should the Agency find or if it is brought to our attention that a website contains false or misleading statements or claims substantially differing from the EPA approved registration, the website will be referred to the EPA's Office of Enforcement and Compliance.

Your release for shipment of the product constitutes acceptance of these conditions. If these conditions are not complied with, the registration will be subject to cancellation in accordance

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with FIFRA section 6. If you have any questions, please contact Autumn Metzger at 703-305-5314 or Metzger.autumn@epa.gov.

Sincerely,

A handwritten signature in dark ink, appearing to read 'Gebken', with a long horizontal flourish extending to the right.

Richard Gebken
Product Manager 10
Invertebrate & Vertebrate Branch 2
Office of Pesticide Programs

Enclosure

Restricted Use Pesticide. Due to toxicity to fish and aquatic organisms. For retail sale to and use only by Certified Applicators, or persons under their direct supervision, and only for those uses covered by the Certified Applicator's certification.

GROUP 15 3A INSECTICIDE

DoubleTake™

Insecticide / Insect Growth Regulator Suspension Concentrate

**For use as a foliar spray on cotton, peanuts, peppers,
soybeans and tree nuts**

**Net
Contents:
Gallon**

Active Ingredients: (% by weight)

diflubenzuron

N-[[[(4-Chlorophenyl)amino]carbonyl]-2,6-difluorobenzamide* 22%

lambda-cyhalothrin

[1-alpha(S*), 3-alpha(Z)-(±)-cyano(3-phenoxyphenyl)methyl 3-(2-chloro-3,3,3-trifluoro-1-propenyl)-2,2-dimethylcyclopropane-carboxylate* 11%

Other Ingredients: 67%

TOTAL 100%

*Contains 2 lbs. diflubenzuron and 1 lb. lambda-cyhalothrin per gallon.

KEEP OUT OF REACH OF CHILDREN

WARNING - AVISO

Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle. (If you do not understand the label, find someone to explain it to you in detail.)

FIRST AID

IF SWALLOWED

- Call a poison control center or doctor immediately for treatment advice.
- Have person sip a glass of water if able to swallow.
- Do not give anything to an unconscious person.
- Do not induce vomiting unless told to do so by the poison control center or doctor.

IF IN EYES

- Hold eye open and rinse slowly and gently with water for 15-20 minutes.
- Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.
- Call a poison control center or doctor for treatment advice.

IF INHALED

- Move person to fresh air.
- If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible.
- Call a poison control center or doctor for treatment advice.

EMERGENCY ASSISTANCE: Have the product container or label with you when calling a poison control center or doctor, or going for treatment.

MEDICAL EMERGENCY 800-292-5898
TRANSPORTATION EMERGENCY (CHEMTREC) 800-424-9300
PRODUCT SAFETY DATA (MSDS) 866-430-2775

For PRODUCT USE INFORMATION: Call 800-243-2850

EPA REG. NO. 400-593
EPA EST. NO.
004/

Made in The Netherlands

Manufactured for:
MacDermid Agricultural Solutions, Inc.
245 Freight Street
Waterbury, CT 06702

ACCEPTED

11/25/2014

Under the Federal Insecticide, Fungicide
and Rodenticide Act as amended, for the
pesticide registered under
EPA Reg. No. 400-593

**PRECAUTIONARY STATEMENTS
HAZARDS TO HUMANS AND DOMESTIC ANIMALS
WARNING**

May be fatal if swallowed. Causes moderate eye irritation. Harmful if inhaled. Avoid breathing spray mist or vapor. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet.

PERSONAL PROTECTIVE EQUIPMENT

Some materials that are chemical-resistant to this product are listed below. If you want more options, follow the instructions for Category A on an EPA chemical-resistant selection chart.

Applicators and Other Handlers Must Wear: A long-sleeved shirt & long pants; chemical-resistant gloves, such as barrier laminate, nitrile rubber, neoprene rubber, natural rubber, polyethylene when mixing and loading and also when using hand-held equipment; shoes plus socks.

Mixers and Loaders Using Fixed-Wing Aircraft Must Wear: A long-sleeved shirt and long pants; chemical-resistant gloves such as barrier laminate, butyl rubber, nitrile rubber, neoprene rubber, natural rubber, polyethylene, PVC or viton; shoes plus socks; dust/mist filtering respirator (MSHA/NIOSH approval number prefix TC-21C or a NIOSH approved respirator with any N, R, P or HE filter).

Follow manufacturer's instructions for cleaning and maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry.

When handlers use closed systems (including water soluble bags), enclosed cabs, or aircraft in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240(d)(4-6)], the handler PPE requirements may be reduced or modified as specified in the WPS.

USER SAFETY RECOMMENDATIONS

Users should:

- Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet.
- Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

ENVIRONMENTAL HAZARDS

This pesticide is extremely toxic to fish and aquatic organisms, and toxic to wildlife, terrestrial juvenile insects, and mollusks/insects. Do not apply directly to water or to areas where surface water is present or to intertidal areas below the mean high water mark. Do not apply when weather conditions favor drift from treated areas. Drift and runoff from treated areas may be hazardous to aquatic organisms in water adjacent to treated areas. Do not contaminate water when disposing of equipment washwaters or rinsate.

This product is highly toxic to bees exposed to direct treatment or residues in blooming crops or weeds. Do not apply this product or allow it to drift to blooming crops or weeds if bees are visiting the treatment area.

DIRECTIONS FOR USE

Restricted Use Pesticide

It is a violation of Federal Law to use this product in a manner inconsistent with its labeling.

Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application.

For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation.

AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR Part 170. This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE) and restricted entry interval. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 24 hours.

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water, is:

- coveralls
- chemical-resistant gloves such as barrier laminate, butyl rubber, nitrile rubber, natural rubber or polyethylene.
- shoes plus socks.

STORAGE AND DISPOSAL

Do not contaminate water, food or feed by storage or disposal. Avoid freezing.

PESTICIDE STORAGE - Store in original container only.

PESTICIDE DISPOSAL - Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.

CONTAINER HANDLING

Plastic containers: Nonrefillable container. Do not reuse or refill this container. Triple rinse or pressure rinse (or equivalent) promptly after emptying.

Triple rinse as follows:

For containers small enough to shake: Empty the remaining contents into a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container 1/4 full with water and then recap. Shake for 10 seconds. Pour rinsate into a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times.

Nonrefillable container greater than 5 gallons. Do not use or refill this container. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty remaining contents into application equipment or a mix tank. Fill the container 1/4 full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times.

Nonrefillable container greater than 56 gallons. Do not refill this container. Cleaning the container before disposal is the responsibility of the person disposing of the container. To clean the container before final disposal, empty the remaining contents from this container into application equipment or mix tank. Fill the container about 10 percent full of water. Agitate vigorously or recirculate water with pump for two minutes. Pour or pump rinsate into application equipment or rinsate collection equipment. Repeat this rinsing procedure two more times.

Pressure rinse as follows: Empty the remaining contents into a mix tank and continue to drain for 10 seconds after the flow continues to drip. Hold container upside down over mix tank to collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container and rinse about 40 PSI for at least 30 seconds. Drain for 10 seconds after the flow begins to drip.

Then offer container for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, by incineration or if allowed by State and local authorities, by burning. If burned, stay out of smoke.

CONTAINER IS NOT SAFE FOR FOOD, FEED OR DRINKING WATER!

Recycling: Once cleaned, some agricultural plastic pesticide containers can be taken to a container collection site or picked up for recycling. To find the nearest site, contact your chemical dealer or manufacturer or contact the Ag Container Recycling Council (ACRC) at 1-877-952-2272 (toll free) or www.acrecycle.org.

PRODUCT INFORMATION

DoubleTake is a premix product containing both an insecticide and an insect growth regulator effective in the control of a wide variety of insect pests. Because it contains two modes of action, DoubleTake provides both quick knockdown and long residual control. Initial and residual control is contingent upon thorough coverage of the crop. Apply as a foliar spray in sufficient water to obtain full coverage of the foliage and fruit. When foliage is dense or pest pressure is high (heavier insect or egg pressure, larger instar stages), use higher application volumes and/or higher listed use rates where permitted by the label.

RESISTANCE MANAGEMENT: DoubleTake contains active ingredients from IRAC groups 3 and 15. Some insects are known to develop resistance to products used repeatedly for control. Because resistance development cannot be predicted, the use of this product should conform to resistance management strategies established for the use area. Consult your local or state agricultural authorities for details. Additionally, DoubleTake should be part of an IPM program that follows good management practices to include:

- Scouting regularly and using DoubleTake against early immature stages for best results
- Following the label rate and timing directions
- Maintaining good coverage of all leaf surfaces with adequate water volume
- Alternating treatments to classes of insecticides with different modes of action

RESTRICTIONS

Rotational Crops: Do not plant food or feed crops in DoubleTake or diflubenzuron treated soils within 1 month following last application, unless DoubleTake or other diflubenzuron containing products are labeled for use on the rotational crop.

APPLICATION INSTRUCTIONS

USE AND MIXING DIRECTIONS IF USED WITH WATER:

1. Fill tank with half of the required amount of water.
2. Begin agitation and add required amount of DoubleTake.
3. Continue agitation while adding remainder of water.
4. If permitted for the use site, add proper quantity of oil slowly. To avoid formation of an invert emulsion, use at least 2 parts of water for each part of oil.
5. Continue to provide agitation while applying.

USE AND MIXING DIRECTIONS IF USED WITHOUT WATER:

Always evaluate any potential mixture for compatibility and sprayability. To ensure thorough mixing of DoubleTake with insecticides or other carriers, premix ingredients in a nurse tank prior to being transferred to aerial or ground ULV application equipment. If nurse tank is not available, or unable to simultaneously mix:

1. Fill tank with the required amount of oil and/or oil based insecticide.
2. Begin agitation and add required amount of DoubleTake.
3. After the contents of the tank have been thoroughly agitated, a volume of carrier sufficient to fill the booms and piping system should be drained and then added back to the tank.
4. Continue to provide agitation while applying.

SPRAY DRIFT LABELING

BUFFER ZONES

Vegetative Buffer Strip

Only apply to fields where a 10 foot wide vegetative filter strip of grass or other permanent vegetation exists between the field edge and downward gradient aquatic habitats such as, but not limited to lakes; reservoirs; rivers; permanent streams; marshes, pot holes or natural ponds; estuaries; and commercial fish farm ponds).

For guidance, refer to the following publication for information on constructing and maintaining effective buffers: *Conservation Buffers to Reduce Pesticide Losses*, Natural Resources Conservation Services, USDA, NRCS. 2000. Fort Worth, TX. 21 pp. www.in.nrcs.usda.gov/technical/agronomy/newconbuf.pdf

For ground application, do not apply within 25 feet of aquatic habitats.

For aerial application (low and high volume), do not apply within 150 feet of aquatic habitats.

For aerial application (ULV), do not apply within 450 feet of aquatic habitats.

In the state of New York, a 25 foot vegetative non-crop buffer strip untraversed by drainage tiles must be maintained between a treated field and a coastal marsh (or stream that drains into a coastal marsh), for both aerial and ground application. For aerial applications, the 25 foot vegetative non-crop buffer strip for runoff protection would be part of the larger 150 foot buffer strip (or 450 ft. buffer strip for ULV application) required for spray drift.

SPRAY DRIFT REQUIREMENTS

Wind Speed and Direction

Only apply this product if the wind direction favors on-target deposition.

Do not apply when the wind velocity exceeds 15 mph.

Temperature Inversion

Do not make ground or aerial applications into temperature inversions. Inversions are characterized by stable air and increasing temperatures with height above the ground. Mist or fog may indicate the presence of an inversion in humid areas. The applicator may detect the presence of an inversion by producing smoke and observing a smoke layer near the ground surface.

Droplet Size

Apply spray with aerial or ground equipment designed or modified to insure full uniform coverage of the entire plant. Use only medium or coarser spray nozzles (for ground and non-ULV aerial applications) according to ASAE (S572) definition for standard nozzles. In conditions of low humidity and high temperatures, applicators should use a coarser droplet size. Adjust equipment to provide droplets with a diameter of 150 to 220 microns.

Additional Requirements for Ground Application

Wind speed must be measured adjacent to the application site on the upward side, immediately prior to application.

For ground boom applications, apply using a nozzle height of no more than 4 feet above the ground or crop canopy.

Additional Requirements for Aerial Application

Mount the spray boom on the aircraft so as to minimize drift caused by wingtip or rotor vortices. Use the minimum practical boom length, and not to exceed 75% of the wing span or 80% rotor diameter.

Flight speed and nozzle orientation must be considered in determining droplet size.

Spray must be released at the lowest height consistent with pest control and flight safety. Do not release spray at a height greater than 10 feet above the crop canopy unless a greater height is required for aircraft safety.

When applications are made with a cross-wind, the swath will be displaced downward. The applicator must compensate for this displacement at the downward edge of the application area by adjusting the path of the aircraft upward.

APPLICATION THROUGH IRRIGATION SYSTEMS - CHEMIGATION

DoubleTake may be applied through properly equipped chemigation systems for insect control in row crops. Apply this product only through sprinkler (including center pivot, lateral move, end tow, side (wheel) roll, traveler, big gun, solid set, or hand move) irrigation systems. Do not apply this product through any other type of irrigation system.

Crop injury, lack of effectiveness, or illegal pesticide residues in the crop can result from non-uniform distribution of treated water. In order to calibrate the irrigation system and injector to apply the mixture, determine the following: 1) Calculate the number of acres irrigated by the system; 2) Set the irrigation rate and determine the number of minutes for the system to cover the intended treatment area; 3) Calculate the total gallons of the mixture needed to cover the desired acreage. Divide the total gallons of mixture needed by the number of minutes to cover the treated area. This value equals the gallons per minute that the injector must deliver. Convert the gallons per minute to ounces per minute. Calibrate the injector pump with the system in operation at the desired irrigation rate. It is suggested that the injector pump be calibrated at least twice before operation, and the system be monitored during operation.

If you have questions about calibration, contact State Extension Service specialists, equipment manufacturers, or other experts. Do not connect an irrigation system (including greenhouse systems) used for pesticide application to a public water system unless the pesticide label-prescribed safety devices for public water systems are in place.

A person knowledgeable of the chemigation system and responsible for its operation or under the supervision of the responsible person, shall shut the system down and make necessary adjustments should the need arise.

CHEMIGATION SYSTEMS CONNECTED TO PUBLIC WATER SYSTEMS

If the chemigation system is connected to a public water supply, the following conditions must also be met:

- Public water systems means a system for the provision to the public of piped water for human consumption if such system has at least 15 service connections or regularly serves an average of at least 25 individuals daily at least 60 days out of the year.
- Chemigation systems connected to public water systems must contain a functional reduced-pressure zone, backflow preventer (RPZ) or the functional equivalent in the water supply line upstream from a point of pesticide introduction. As an option to the RPZ, the water from the public water system should be discharged into a reservoir tank prior to pesticide introduction. There shall be a complete physical break (air gap) between the flow outlet end of the fill pipe and the top or overflow rim of the reservoir tank of at least twice the inside diameter of the fill pipe.
- The pesticide injection pipeline must contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shutdown.
- The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops, or in cases where there is no water pump, when the water pressure decreases to the point where pesticide distribution is adversely affected.
- Systems must use a metering pump, such as a positive displacement injection pump (e.g., diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.
- The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection.
- Upon completion of insecticide application, remove scale, pesticide residues, and other foreign matter from the supply tank and entire injector system. Flush thoroughly with clean water.
- Do not apply when wind speed favors drift beyond the area intended for treatment.

SPRINKLER CHEMIGATION

For continuously moving systems, the mixture containing DoubleTake must be injected continuously and uniformly into the irrigation water line as the sprinkler is moving. If continuously moving irrigation equipment is used, apply in no more than 0.25 inch of water. For sprinkler systems that do not move during operation, apply in no more than 0.25 inch of irrigation immediately before the end of the irrigation cycle.

Maintain continuous agitation of the pesticide supply tank for the duration of the application period.

To apply a pesticide using sprinkler chemigation, the chemigation system must meet the following specifications:

- The system must contain a functional check valve, vacuum relief valve, and low-pressure drain appropriately located on the irrigation pipeline to prevent water source contamination from backflow.
- The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.
- The pesticide injection pipeline must also contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.
- The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops.
- The irrigation line or water pump must include a functional pressure switch, which will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected.
- Systems must use a metering pump, such as a positive displacement injection pump (e.g., diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.
- Do not apply when wind speed favors drift beyond the area intended for treatment.

RATE CONVERSION CHART / MAX. ALLOWABLE RATES PER YEAR

| Crop | RATE (Fl. ozs. / A) | RATE (Lbs. ai. per Acre) | | Max. Rate per Acre per Year (Lbs. ai) | |
|-----------|------------------------|--------------------------|--------------------|---------------------------------------|---------------------------|
| | | Diflubenzuron | Lambda-cyhalothrin | Diflubenzuron | Lambda-cyhalothrin |
| Cotton | 2.0 | 0.0313 | 0.0156 | 0.375 (0.187 post bloom) | 0.2 (0.10 post bloom) |
| | 4.0 | 0.0625 | 0.0313 | | |
| Peanut | 2.0 | 0.0313 | 0.0156 | 0.375 | 0.12 |
| | 4.0 | 0.0625 | 0.0313 | | |
| Pepper | 4.0 | 0.0625 | 0.0313 | 0.375 | 0.36 |
| Soybean | 2.0 | 0.0313 | 0.0156 | 0.125 | 0.12 |
| | 4.0 | 0.0625 | 0.0313 | | |
| Tree Nuts | 4.0 | 0.0625 | 0.0313 | 1.0 (0.75 post bloom) | 0.16 (0.12 post bloom) |
| | 5.0 | 0.0781 | 0.0391 | | |

| Crops | Pests | Application Rate (fl oz/acre) | Application Timing |
|--------|---|----------------------------------|---|
| Cotton | COTTON RESTRICTIONS: Do not exceed a total of 24 fl. ozs. (0.375 lb. diflubenzuron + 0.2 lb. lambda-cyhalothrin) per crop per year. Do not exceed a total of 12 fl. ozs. (0.187 lb. diflubenzuron + 0.1 lb. lambda-cyhalothrin) per crop per year post boll opening. Do not exceed 6 applications per year. Do not harvest within 21 days of application. Do not graze livestock in treated areas. | | |
| | Beet armyworm -early season (before first bloom) | 2 - 4 | For early infestations on young cotton, apply DoubleTake at the first sign of beet armyworm activity (2 egg masses or hatch outs/100 feet of row), either as a directed or broadcast foliar spray. Repeat applications as needed to protect new foliage, but not less than 5 days apart. Multiple applications of DoubleTake will result in optimum coverage of new foliage during the period of rapid vegetative growth. |
| | Beet armyworm - mid season | 4 | Apply starting around first bloom and continue through mid-bloom. Repeat applications as needed to protect new foliage, flower and boll growth, but not less than 5 days apart. First application should coincide with peak moth catches in pheromone traps, indicating another generation of larvae is imminent. DoubleTake is more effective on early stages of larval development, therefore foliage should be treated before populations become established. |
| | Armyworms - Fall - Yellowstriped - Southern Bollworms - Cotton - Pink Cotton fleahopper Cotton leaf perforator Cotton leafworm Cutworms (foliar feeding) European corn borer Loopers - Cabbage - Soybean Saltmarsh caterpillar Stink bugs - Brown - Brown marmorated (BMSB)* - Green - So. Green Thrips - Soybean - Tobacco Tobacco budworm <u>Suppression only</u> Cotton aphid Lygus spp. Two-spotted spider mite Whiteflies - Bandedwinged - Sweetpotato | 4 | Apply during early stages of larval development or when pests first appear. Repeat applications as needed to protect new foliage, flower and boll growth, but not less than 5 days apart. For European corn borer, applications / exposure must be made prior to the larvae boring into the stalk or fruit. |
| | Boll weevil - early season (before first bloom) | 4 | DoubleTake will control boll weevils on contact and also by suppressing reproduction in the adult females. Apply with 2 to 4 qts./ per acre of emulsified cottonseed oil, vegetable oil, or paraffinic crop oil. For ULV application, apply in a minimum of 8 fl.ozs. per acre of emulsified cottonseed oil, oil based insecticide, vegetable based or petroleum based oil carrier. A compatibility agent may be needed if a non-emulsified cotton-seed oil is used. Consult your supplier or MacDermid Agricultural Solutions, Inc. representative for oil specifications. For best suppression of boll weevil reproduction, make first application at pinhead square stage of cotton growth when overwintering boll weevils are entering the fields. Repeat applications must allow a minimum of 7 days between applications. DoubleTake will kill the adult boll weevil. Additionally, eggs deposited by affected female weevils will not hatch, thus limiting reproduction. The control of egg hatch and larval development within the square prevents its shedding and will then allow normal boll development. After the initial exposure to the adult female weevil, those that are not killed outright will lay non-viable eggs for approximately 10 days, and longer if the female is exposed to more DoubleTake. Therefore, optimum control will be achieved with early and multiple applications. |

| Crops | Pests | Application Rate (fl oz/acre) | Application Timing |
|----------------|--|----------------------------------|--|
| Cotton (cont.) | Boll weevil - late season | 2 - 4 | DoubleTake will reduce the number of weevils that emerge during the following spring if applications are made when adult weevils are going into diapause to overwinter. Apply when cotton plants have reached full vegetative growth or when it begins blooming out the top. For LV applications, spray in combination with 2 to 4 qts. per acre of an emulsifiable vegetable oil or paraffinic oil. For ULV application, combine in a minimum of 8 fl.ozs. per acre of emulsified cottonseed oil, oil based insecticide, or vegetable / petroleum based oil carrier. A compatibility agent may be needed if a non-emulsified cottonseed oil is used. Apply at least 2, but not more than 3, applications at 7 to 14 day intervals. |
| | Grasshoppers | 2 - 4 | Apply when the majority of grasshoppers have reached the 2nd to 3rd nymphal stage of development for optimum control. |
| | <p>Use sufficient application volume to assure adequate coverage.</p> <p>Aerial application: Apply in 3 to 5 gallons total volume per acre. For ULV application, use a total volume of 1 to 1 1/2 qts. per acre.</p> <p>Ground application: Apply in 10 to 20 gallons of total volume per acre. For ULV application, use a total volume of 1 to 2 qts. per acre.</p> <p>Adjuvant usage: Always use oil (1 to 2 qt) with DoubleTake for larval/nymphal control if conditions are favorable for water evaporation (e.g. high air temperature and/or low humidity). For ground or aerial LV application, 1 pt to 2 qt of emulsified vegetable or paraffinic crop oil is recommended to enhance canopy penetration and to reduce spray droplet evaporation and subsequent drift. For ULV application, use DoubleTake in a minimum of 20 fl.oz of emulsified cottonseed, vegetable or petroleum based oil carrier. A compatibility agent may be needed if non-emulsified cottonseed oil is used.</p> <p>Consult your supplier representative for oil specifications.</p> | | |

* Not registered for use in California

| Crops | Pests | Application Rate (fl oz/acre) | Application Timing |
|-----------------------------------|---|----------------------------------|--|
| Peanuts (except California) | <p>PEANUT RESTRICTIONS: Repeat application as needed to protect new foliage growth, but not less than 14 days apart.</p> <p>Do not exceed 16 fl. ozs. (0.25 lb. diflubenzuron + 0.12 lb. lambda-cyhalothrin) per acre per year.</p> <p>Do not exceed 4 applications per acre per year.</p> <p>Do not harvest within 28 days of application.</p> <p>Do not graze or harvest treated forage for livestock feed.</p> | | |
| | Bean leaf beetle Corn earworm Cutworms (foliar feeding) Grasshoppers Green cloverworm Mexican bean beetle Potato leafhopper Red-necked peanut worm Southern corn rootworm Stinkbugs - including brown marmorated (BMSB) Three-cornered alfalfa hopper Tobacco thrip Vegetable weevil Velvetbean caterpillar Whitefringed beetle (adult) | 2 - 4 | <p>For optimum control and minimal damage, begin applications when worm or beetle larvae are small (< 0.5 inch) or in early instar stages.</p> <p>For grasshoppers, apply at 2nd - 3rd nymphal stage. Use the 4 fl.oz./A rate if the crop has a history of heavy infestations, dense foliage is present, or greater residual control is desired.</p> <p>For southern corn rootworm (cucumber beetle) and vegetable weevil, in addition to direct control of adults, eggs laid by surviving adults that have been exposed to DoubleTake through contact or feeding will exhibit reduced hatch.</p> |
| | Armyworms - Beet - Fall - Southern - Yellow-striped Lesser cornstalk borer <u>Suppression only</u> Aphids Soybean looper Spider mites | 4 | <p>For optimum control and minimal damage, begin applications when larvae are small (< 0.5 inch) and in early instars.</p> <p>For aphid and spider mite suppression, begin applications when populations are first noticed based on scouting.</p> |
| | <p>Aerial Application: Apply in 3 to 5 gallons of water per acre to achieve uniform coverage of foliage.</p> <p>Ground Application: Apply in 10 to 35 gallons of water per acre to give uniform coverage.</p> <p>Adjuvant usage: Always use oil (1 to 2 qt) with DoubleTake for larval/nymphal control if conditions are favorable for water evaporation (e.g. high air temperature and/or low humidity). For ground or aerial LV application, 1 pt to 2 qt of emulsified vegetable or paraffinic crop oil is recommended to enhance canopy penetration and to reduce spray droplet evaporation and subsequent drift. For ULV application, use DoubleTake in a minimum of 20 fl.oz of emulsified cottonseed, vegetable or petroleum based oil carrier. A compatibility agent may be needed if non-emulsified cottonseed oil is used.</p> <p>Consult your supplier representative for oil specifications.</p> | | |
| | | | |

| Crops | Pests | Application Rate (fl oz/acre) | Application Timing |
|--------------------------------|--|----------------------------------|---|
| Pepper Bell and Non Bell | PEPPER RESTRICTIONS: Repeat application as needed to protect new foliage and fruit growth, but not less than 7 days apart. Do not exceed 24 fl ozs. per (0.375 lb. diflubenzuron + 0.2 lb. lambda-cyhalothrin) per acre per year. Do not exceed 6 applications per year. Do not apply within 7 days of harvest. | | |
| | Armyworms - Beet - Fall - Southern - Yellow striped Blister beetle Cabbage looper Colorado potato beetle Corn rootworms Cutworms (foliar feeding) European corn borer Flea beetles Foliage feeding Lepidopteran larvae Grasshoppers Hornworms Japanese beetle Leafhoppers Meadow spittlebug Pepper weevil Plant bugs Stalk borer Stink bug - including brown marmorated (BMSB)* Thrips (ex. W. flower thrip) Tobacco budworm Tomato fruitworm Tomato pinworm Vegetable weevil <u>Suppression only</u> Aphids Leafminers Lygus Western flower thrip* Spider mites Whiteflies | 4 | For optimum control and minimal damage, begin applications when worm or beetle larvae are small (< 0.5 inch) or in early (1st - 2nd) instar stages. For Colorado potato beetle, corn rootworms (cucumber beetles) and Japanese beetles, in addition to direct control of adults, eggs laid by surviving adults that have been exposed to DoubleTake through contact or feeding will exhibit reduced hatch. For grasshoppers, apply at 2nd - 3rd nymphal stage. For European corn borer and stalk borer control, applications / exposure must be made prior to the larvae boring into the stalk or fruit. For pepper weevil and vegetable weevil, begin applications at initial flowering. In addition to direct control of adults, eggs laid by surviving adults that have been exposed to DoubleTake through contact or feeding will exhibit reduced hatch in fruit. |
| | Aerial application: Apply in 3 to 10 gallons of water per acre to achieve uniform coverage of foliage. Ground application: Use a minimum of 30 gallons of water per acre to give uniform coverage. Adjuvant usage: Always use oil (1 to 2 qt) with DoubleTake for larval/nymphal control if conditions are favorable for water evaporation (e.g. high air temperature and/or low humidity). For ground or aerial LV application, 1 pt to 2 qt of emulsified vegetable or paraffinic crop oil is recommended to enhance canopy penetration and to reduce spray droplet evaporation and subsequent drift. For ULV application, use DoubleTake in a minimum of 20 fl. oz of emulsified cottonseed, vegetable or petroleum based oil carrier. A compatibility agent may be needed if non-emulsified cottonseed oil is used. Consult your supplier representative for oil specifications. | | |

* Not registered for use in California

| Crops | Pests | Application Rate (fl oz/acre) | Application Timing |
|-----------------------------------|---|----------------------------------|---|
| Soybean (except California) | SOYBEAN RESTRICTIONS: Use on soybeans not registered by the California Department of Pesticide Regulation. Repeat application as needed to protect new foliage, flower and pod growth, but not less than 30 days apart. Do not exceed 8 fl.ozs. per (0.0.125 lb. diflubenzuron + 0.063 lb. lambda-cyhalothrin) per acre per year. Do not exceed 2 applications per year. Do not harvest within 30 days of application. Do not graze or harvest treated soybean forage, straw or hay for livestock feed. | | |
| | Armyworms - Beet - Fall - Southern Bean leaf beetle Blister beetle Cabbage looper Corn earworm Corn rootworm beetles - Mexican - Northern - Southern - Western Cutworms (foliar feeding) European corn borer Foliage feeding Lepidopteran larvae Grasshoppers Green cloverworm Japanese beetle Kudzu bug (bean plataspid) Mexican bean beetle Painted lady (thistle) caterpillar Plant bugs Potato leafhopper Saltmarsh caterpillar Silverspotted skipper Soybean aphid Stink bugs - including brown marmorated (BMSB) Three cornered alfalfa hopper Thrips Tobacco budworm Velvet bean caterpillar Webworms Woollybear caterpillar | 2 - 4 | For optimum control and minimal damage, begin applications when worm or beetle larvae are small (< 0.5 inch) or in early (1st - 2nd) instar stages. For European corn borer control, applications / exposure must be made prior to the larvae boring into the stems or pods. For grasshoppers, apply at 2nd - 3rd nymphal stage. For corn rootworms and Japanese beetles, in addition to direct control of adults, eggs laid by surviving adults that have been exposed to DoubleTake through contact or feeding will exhibit reduced hatch. Use the 4 fl.oz./A rate if the crop has a history of heavy infestations, dense foliage is present, or greater residual control is desired. The lower rate (2 fl. oz.) can be used to prevent insect build-up when the vegetative growth is completed and pod formation begins. Consult local Extension Service regarding infestation levels requiring treatment. |
| | <u>Suppression only</u> Lesser cornstalk borer Soybean looper Spider mites | 4 | Application must be made when worms are small before populations build. For lesser cornstalk borer suppression, applications / exposure must be made prior to the larvae boring into the stems or pods. |
| | Aerial application: Apply in sufficient water (3 to 5 gallons per acre) to achieve uniform coverage of foliage. Ground application: Apply in 9 to 35 gallons of water per acre to give uniform coverage. Adjuvant usage: Always use oil (1 to 2 qt) with DoubleTake for larval/nymphal control if conditions are favorable for water evaporation (e.g. high air temperature and/or low humidity). For ground or aerial LV application, 1 pt to 2 qt of emulsified vegetable or paraffinic crop oil is recommended to enhance canopy penetration and to reduce spray droplet evaporation and subsequent drift. For ULV application, use DoubleTake in a minimum of 20 fl. oz of emulsified cottonseed, vegetable or petroleum based oil carrier. A compatibility agent may be needed if non-emulsified cottonseed oil is used. Consult your supplier representative for oil specifications. Soybean yield enhancement: In the absence of significant insect pressure and under certain growing conditions, an increase in soybean seed yield has been demonstrated with diflubenzuron containing products under field conditions on both determinate and indeterminate cultivars. Application of 2 to 4 fl oz per acre to high yield potential soybean plants at the R3 to R3.5 growth stage period has been more consistent in increasing yields than applications at other reproductive stages of the soybean plant. This reproductive period represents beginning pod growth (pod 3/16 inch long at one of the uppermost nodes on the main stem with a fully developed leaf) to just prior to full pod elongation (pod 3/4 inch long at one of the 4 uppermost nodes on the main stem with a fully developed leaf). | | |

| Crops | Pests | Application Rate (fl oz/acre) | Application Timing |
|--|--|----------------------------------|---|
| Tree nuts group, includes Almond Beech nut Brazil nut Butternut Chestnut Chinquapin Filbert (hazelnut) Hickory nut Macadamia nut (bush nut) Pecan Pistachio Walnut (black & English) | TREE NUT RESTRICTIONS: Do not exceed 4 applications (3 for walnuts) per growing season. Do not exceed 20 fl. ozs. (0.313 lb. diflubenzuron + 0.156 lb. lambda-cyhalothrin) per acre per growing season. Do not exceed 15 fl. ozs. (0.234 lbs. diflubenzuron + 0.117 lb. lambda-cyhalothrin) per acre per growing season post bloom. Pre-harvest Interval: Do not harvest within 28 days of application. | | |
| | Codling moth* | 4 - 5 | DOUBLETAKE is most effective when applied from egg laying to egg hatch (100 to 200 DD following biofix). Apply first application when moth flights begin or when moths are found in pheromone traps. Apply the 2nd application no less than 21 days after the 1st application to cover new growth in foliage and nuts. For control of the 2nd generation, application should be timed from egg laying to egg hatch, followed by a second applications no less than 21 days later. |
| | Filbert worm | 4 - 5 | Apply at egg hatch (2 to 3 days after the 1st moth is caught in pheromone detection traps) Mating takes place within several days of emergence and egg laying begins the next day. DOUBLETAKE is most effective when applied from egg laying to egg hatch. Good uniform coverage of the tree is essential to achieve optimum control of filbert worm. Apply 4 fl. ozs per acre where filbert worm pressure is low and/or the trees are small. Apply 5 fl. ozs. per acre when pest pressure is moderate to high and/or the trees are large. If moth pressure remains high as indicated by sustained detection of moths in pheromone traps, reapply at 21 day intervals. |
| | Hickory shuckworm | 4 - 5 | Begin applications when hickory shuckworm moth emergence begins or larval feeding is detected at half-shell hardening. Make subsequent applications at 21-day intervals through shuck split, or while nuts are susceptible to heavy shuckworm pressure. Use the higher rate under higher pest infestations, low crop load, larger trees or heavy, dense foliage. |
| | Navel Orangeworm | 4 - 5 | Almonds: Apply first application at initiation of hull split (1 to 5% hull split), with a second application 21 days later. If high populations are present, make a third application 21 days after the second application. Walnuts: Begin applications at initiation of egg laying to egg hatch. Reapply at 21 day intervals, with a maximum of 3 applications per crop per growing season.. |
| | Oblique banded leafroller | 4 - 5 | DOUBLETAKE is most effective when applied from egg laying to egg hatch (200 to 400 DD following biofix) on the second (summer) generation. Reapply 21 days later. For Filbert (hazelnut): Make 1 to 2 applications at a 21 day intervals depending on populations of the overwintering, spring generation. |
| | Pecan Aphid species Pecan Phylloxera species Pecan Spittlebug | 4 - 5 | Apply as required by scouting, at first sign of infestation, with reapplication of 21 days or more. Timing and frequency of applications should be based on insect populations reaching locally determined economic threshold. |
| | Peach twig borer | 4 - 5 | Dormant/delayed dormant: Apply in 4 to 8 gallons of narrow range oil (1.5 to 2.0 gallons per 100 gallons in a dilute spray) per acre. Always use 5 fl. ozs. DOUBLETAKE per acre if the crop has a history of heavy infestations. Bloom: Apply starting at early bloom. Do not spray when bees are actively foraging - bloom sprays must be applied only between 7:00 PM and 7:00 AM. Always use 5 fl. ozs. per acre if the crop has a history of heavy infestations. Spring flight ("May Spray"): Apply at 5 fl. ozs. per acre at initial flight activity, using pheromone traps to determine flight activity. Summer flight: Apply at 5 fl. ozs. per acre at initial flight activity, using pheromone traps to determine flight activity. |
| | Pecan nut casebearer | 4 - 5 | Apply beginning at 50 – 100% catkin elongation and repeat at 21 day intervals for maximum nut set and pecan nut case bearer control. Normal timing in the southeastern US would be around mid-April for first spray, and then at 21 day intervals until pecan casebearer moth emergence is over. Each adult generation is approximately 8 to 15 days following the first prolonged moth catch (biofix, which is defined as the date on which the total of 5 moths are captured in 3 pheromone traps within a 7-day period). Use the higher listed rate for longer residual control, higher pest infestations, low crop load, larger trees or heavy, dense foliage. |
| Apply ground applications in sufficient water for thorough coverage, using at least 50 gallons per acre for small trees (10 feet tall) and at least 100 to 300 gallons per acre for larger trees. Using insufficient water for thorough coverage and/or using an uneven spray pattern across the canopy will likely result in less than desired efficacy. If 4 applications are used, application timing should correspond to dormant to pre-bud swell, bloom to petal fall, and at leaves/immature nut fruit formation and at hull split. | | | |

* Not registered for use in California

| Crops | Pests | Application Rate (fl oz/acre) | Application Timing |
|---|---|----------------------------------|--|
| Tree nuts group (cont.), includes Almond Beech nut Brazil nut Butternut Chestnut Chinquapin Filbert (hazelnut) Hickory nut Macadamia nut (bus nut) Pecan Pistachio Walnut (black & English) | <p>TREE NUT RESTRICTIONS: Do not exceed 4 applications (3 for walnuts) per growing season.</p> <p>Do not exceed 20 fl. ozs. (0.313 lb. diflubenzuron + 0.156 lb. lambda-cyhalothrin) per acre per growing season.</p> <p>Do not exceed 15 fl. ozs. (0.234 lbs. diflubenzuron + 0.117 lb. lambda-cyhalothrin) per acre per growing season post bloom.</p> <p>Pre-harvest Interval: Do not harvest within 28 days of application.</p> | | |
| | Pecan weevil | 4 - 5 | Apply when first adult weevils are observed and repeat at 21 day intervals until weevil emergence is finished. Use the higher listed rate if weevils are attacking nuts and for higher infestations |
| | Others, including: Ants Chinch Bug Leaf footed bug Plant Bug species Stink bugs species, (including brown marmorated stink bug) Walnut Aphid Walnut Husk Fly species (Adult) Fall webworm* Filbert leafroller Omnivorous leafroller Omnivorous leaf-tier* Oriental fruit moth* Redhumped* caterpillar Variegated leafroller Walnut caterpillar* Winter moth* | 4 - 5 | Apply at first signs of infestation (egg laying, egg hatch, or larval presence), as determined by scouting when insect populations reach locally developed economic thresholds. Use the higher rate for longer residual control, high pest population, low crop load, larger trees, or heavy / dense foliage. Reapply at 21 day intervals under sustained pest pressure. |
| | <p>Ground Application: Apply in sufficient water for thorough coverage, using at least 50 gallons per acre for small trees and at least 100 to 400 gallons per acre for large trees. Inadequate or uneven coverage of the trees and crop may result in reduced control of target pests.</p> <p>If 4 applications are used, application timing should correspond to dormant to pre-bud swell, bloom to petal fall, and at leaves / immature nut fruit formation at hull split.</p> <p>Aerial Application: Apply in a minimum of 5 gallons per acre on small trees, but use higher volumes on larger trees to ensure thorough coverage. Aerial applications may result in reduced efficacy on trees with dense foliage which prevents thorough coverage of the tree and crop.</p> | | |

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IMPORTANT NOTICE—To the extent consistent with applicable law, seller warrants that this product conforms to its chemical description and is reasonably fit for the purposes stated on the label when used in accordance with the directions and instructions specified on the label under normal conditions of use, but neither this warranty nor any other warranty of merchantability or fitness for a particular purpose, express or implied, extends to the use of this product, contrary to label instructions, or under abnormal conditions, or under conditions not reasonably foreseeable to seller, and the buyer assumes the risk of any such use.

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Restricted Use Pesticide. Due to toxicity to fish and aquatic organisms. For retail sale to and use only by Certified Applicators, or persons under their direct supervision, and only for those uses covered by the Certified Applicator's certification.

SUPPLEMENTAL LABEL

DoubleTake™

**Insecticide/Insect Growth Regulator
Suspension Concentrate
EPA REG. No. 400-593**

FOR USE AS A FOLIAR APPLICATION TO TREE NUTS

THIS SUPPLEMENTAL LABEL EXPIRES ON 10/17/2017 AND MUST NOT BE DISTRIBUTED AFTER THIS DATE.

ACCEPTED

11/25/2014

Under the Federal Insecticide, Fungicide
and Rodenticide Act as amended, for the
pesticide registered under
EPA Reg. No. 400-593

Active Ingredients: (% by weight)

diflubenzuron

N-[[[(4-Chlorophenyl)amino]carbonyl]-2,6-difluorobenzamide*22%

lambda-cyhalothrin

[1-alpha(S*), 3-alpha(Z)-(±)-cyano(3-phenoxyphenyl)methyl 3-(2-chloro-3,3,3-trifluoro-1-propenyl)-
2,2-dimethylcyclopropane-carboxylate*11%

Other Ingredients:67%

TOTAL.....100%

*Contains 2 lbs. diflubenzuron and 1 lb. lambda-cyhalothrin per gallon.

KEEP OUT OF REACH OF CHILDREN WARNING - AVISO

**Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle.
(If you do not understand the label, find someone to explain it to you in detail.)**

**This supplemental label contains directions for use that are in addition to those on the container.
Read the label affixed to the container for DoubleTake before applying.**

DIRECTIONS FOR USE

| Crops | Pests | Application Rate (fl oz/acre) | Application Timing |
|--|---|----------------------------------|--|
| Tree nuts group, includes Almond Beech nut Brazil nut Butternut Chestnut Chinquapin Filbert (hazel- nut) Hickory nut Macadamia nut (bush nut) Pecan Pistachio Walnut (black & English) | TREE NUT RESTRICTIONS: Do not exceed 4 applications (3 for walnuts). Do not exceed 20 fl. ozs. (0.313 lb. diflubenzuron + 0.156 lb. lambda-cyhalothrin) per acre per growing season. Do not exceed 15 fl. ozs. (0.234 lbs. diflubenzuron + 0.117 lb. lambda-cyhalothrin) per acre per growing season post bloom. Pre-harvest Interval: Do not harvest within 28 days of application. | | |
| | Codling moth* | 4 - 5 | DOUBLETAKES is most effective when applied from egg laying to egg hatch (100 to 200 DD following biofix). Apply first application when moth flights begin or when moths are found in pheromone traps. Apply the 2nd application no less than 21 days after the 1st application to cover new growth in foliage and nuts. For control of the 2nd generation, application should be timed from egg laying to egg hatch, followed by a second applications no less than 21 days later. |
| | Filbert worm | 4 - 5 | Apply at egg hatch (2 to 3 days after the 1st moth is caught in pheromone detection traps). Mating takes place within several days of emergence and egg laying begins the next day. DOUBLETAKES is most effective when applied from egg laying to egg hatch. Good uniform coverage of the tree is essential to achieve optimum control of filbert worm. Apply 4 fl. ozs per acre where filbert worm pressure is low and/or the trees are small. Apply 5 fl. ozs. per acre when pest pressure is moderate to high and/or the trees are large. If moth pressure remains high as indicated by sustained detection of moths in pheromone traps, reapply at 21 day intervals. |

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THIS LABEL IS IN ADDITION TO THE STANDARD FEDERAL LABEL PRINTED ON THE CONTAINER

Follow all applicable directions, restrictions, and precautions on this supplemental label and the main EPA registered label affixed to the container for DoubleTake.

It is a violation of federal law to use this product in a manner inconsistent with its labeling.

The labeling must be in the possession of the user at the time of pesticide application.

Use of DoubleTake according to this labeling is subject to the use precautions and limitations imposed by the label affixed to the container for DoubleTake.

DoubleTake is a Trademark of MacDermid Agricultural Solutions, Inc.

Manufactured for:

MacDermid Agricultural Solutions, Inc.

245 Freight Street

Waterbury, CT 06702

| Crops | Pests | Application Rate (fl oz/acre) | Application Timing |
|--|---|----------------------------------|---|
| Tree nuts group, includes Almond Beech nut Brazil nut Butternut Chestnut Chinquapin Filbert (hazel-nut) Hickory nut Macadamia nut (bush nut) Pecan Pistachio Walnut (black & English) | <p>TREE NUT RESTRICTIONS: Do not exceed 4 applications (3 for walnuts). Do not exceed 20 fl.ozs. (0.313 lb. diflubenzuron + 0.156 lb. lambda-dyhalothrin) per acre per growing season. Do not exceed 15 fl. ozs. (0.234 lbs. diflubenzuron + 0.117 lb. lambda-cyhalothrin) per acre per growing season post bloom. Pre-harvest Interval: Do not harvest within 28 days of application.</p> | | |
| | Hickory shuckworm | 4 - 5 | Begin applications when hickory shuckworm moth emergence begins or larval feeding is detected at half-shell hardening. Make subsequent applications at 21-day intervals through shuck split, or while nuts are susceptible to heavy shuckworm pressure. Use the higher rate under higher pest infestations, low crop load, larger trees or heavy, dense foliage. |
| | Navel Orangeworm | 4 - 5 | Almonds: Apply first application at initiation of hull split (1 to 5% hull split), with a second application 21 days later. If high populations are present, make a third application 21 days after the second application. Walnuts: Begin applications at initiation of egg laying to egg hatch. Reapply at 21 day intervals, with a maximum of 3 applications per crop per growing season.. |
| | Oblique banded leafroller | 4 - 5 | DOUBLETAKE is most effective when applied from egg laying to egg hatch (200 to 400 DD following biofix) on the second (summer) generation. Reapply 21 days later. For Filbert (hazelnut): Make 1 to 2 applications at a 21 day intervals depending on populations of the overwintering, spring generation. |
| | Pecan Aphid species Pecan Phylloxera species Pecan Spittlebug | 4 - 5 | Apply as required by scouting, at first sign of infestation, with reapplication of 21 days or more. Timing and frequency of applications should be based on insect populations reaching locally determined economic threshold. |
| | Peach twig borer | 4 - 5 | Dormant/delayed dormant: Apply in 4 to 8 gallons of narrow range oil (1.5 to 2.0 gallons per 100 gallons in a dilute spray) per acre. Always use 5 fl. ozs. DOUBLETAKE per acre if the crop has a history of heavy infestations. Bloom: Apply starting at early bloom. Do not spray when bees are actively foraging - bloom sprays must be applied only between 7:00 PM and 7:00 AM. Always use 5 fl. ozs. per acre if the crop has a history of heavy infestations. Spring flight ("May Spray"): Apply at 5 fl. ozs. per acre at initial flight activity, using pheromone traps to determine flight activity. Summer flight: Apply at 5 fl. ozs. per acre at initial flight activity, using pheromone traps to determine flight activity. |
| | Pecan nut casebearer | 4 - 5 | Apply beginning at 50 – 100% catkin elongation and repeat at 21 day intervals for maximum nut set and pecan nut case bearer control. Normal timing in the southeastern US would be around mid-April for first spray, and then at 21 day intervals until pecan casebearer moth emergence is over. Each adult generation is approximately 8 to 15 days following the first prolonged moth catch (biofix, which is defined as the date on which the total of 5 moths are captured in 3 pheromone traps within a 7-day period). Use the higher listed rate for longer residual control, higher pest infestations, low crop load, larger trees or heavy, dense foliage. |
| | Pecan weevil | 4 - 5 | Apply when first adult weevils are observed and repeat at 21 day intervals until weevil emergence is finished. Use the higher listed rate if weevils are attacking nuts and for higher infestations |
| | Others, including: Ants Chinch Bug Leaf footed bug Plant Bug species Stink bugs species, (including brown marmorated stink bug) Walnut Aphid Walnut Husk Fly species (Adult) Fall webworm* Filbert leafroller Omnivorous leafroller Omnivorous leaftier* Oriental fruit moth* Redhumped caterpillar* Variegated leafroller Walnut caterpillar* Winter moth* | 4 - 5 | Apply at first signs of infestation (egg laying, egg hatch, or larval presence), as determined by scouting when insect populations reach locally developed economic thresholds. Use the higher rate for longer residual control, high pest population, low crop load, larger trees, or heavy / dense foliage. Reapply at 21 day intervals under sustained pest pressure. |
| | <p>Ground Application: Apply in sufficient water for thorough coverage, using at least 50 gallons per acre for small trees and at least 100 to 400 gallons per acre for large trees. Inadequate or uneven coverage of the trees and crop may result in reduced control of target pests.</p> <p>If 4 applications are used, application timing should correspond to dormant to pre-bud swell, bloom to petal fall, and at leaves/immature nut fruit formation and at hull split.</p> <p>Aerial Application: Apply in a minimum of 5 gallons per acre on small trees, but use higher volumes on larger trees to ensure thorough coverage. Aerial applications may result in reduced efficacy on trees with dense foliage which prevents thorough coverage of the tree and crop.</p> | | |

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